Masa IKUSE*: **The presence of the viscid threads among pollen grains in Phyllodoceae, etc. of Ericaceae.**

幾瀬マサ*: ツツジ科のツガザクラ族其他の花粉粒の粘結糸について

(with Plate VII)

On examining pollen grains of Japanese Ericaceae, the authoress noticed that viscid fine threads among pollen tetrads are more widely found in the family than hitherto been reported. So far as Japanese materials are concerned those threads are observed in all genera of Subfam. Rhododendroideae such as *Rhododendron* (in the wide sense), *Tsusiophyllum*, *Menziesia*, *Ledum*, *Tripetaleia*, *Phyllodoce* and *Loiseleuria*, and also *Epigaea* of Trib. Andromedeae in Subfam. Arbutoideae. However, they are so few and fine in *Tsusiophyllum*, *Ledum*, *Phyllodoce*, *Loiseleuria*, and *Epigaea*, compared with those of *Rhododendron* that their presence in those genera is easily overlooked, and is confirmed only under very careful treatment. The observation was made following the ordinary procedure, i.e. pollen grains were prepared from living materials, fixed by absolute alchohol, stained with Gentian-Violet and then mounted in Glycelin-jelly.

Trib. Phyllodoceae has hitherto been considered to have no threads among pollens, and in 1889 Drude stated decidedly that it has "Pollen ohne verbindende Fäden." Fedtschenko & Basilevskaja in 1928 observed the threads in Trib. Ledeae, but noted that *Menziesia* has grains without threads. In 1943, H.F. Copeland stated as follows: "The complete list of those in which they [threads] have observed consists of *Bejaria*, *Elliottia* [including *Tripetaleia*], *Cladothamnus*, *Menziesia*, *Azalea*, *Azaleastrum*, *Rhododendron*, and *Hymenanthes*. They are absent from *Rhodothamnus*, *Dendrium*, *Kalmia*, *Phyllodoce*, *Loiseleuria*, *Daboecia* and *Ledum*. According to my understanding of the relationships, I would expect confidently to find them in *Tsusiophyllum* and *Therorhodion*, and not to find them in *Diplarche*, *Bryanthes* or *Ledothamnus*." Then he established a new tribe, Cladothamneae, including *Tripetaleia*, and he separated it from Tribe Phyllodoceae principally in having fine filaments among pollen tetrads. As the authoress observed the

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threads in *Phyllodoce*, *Loiseleuria*, and *Kalmia* of Trib. Phyllodoceae, so the two tribes cannot be distinguished by that character.

Now it became apparent that the presence or absence of the threads among pollen tetrads is not correlated directly with the way of the dehiscence of anthers or other morphological characters in Ericaceae, and this character seems to be only of secondary importance. The evaluation of this character

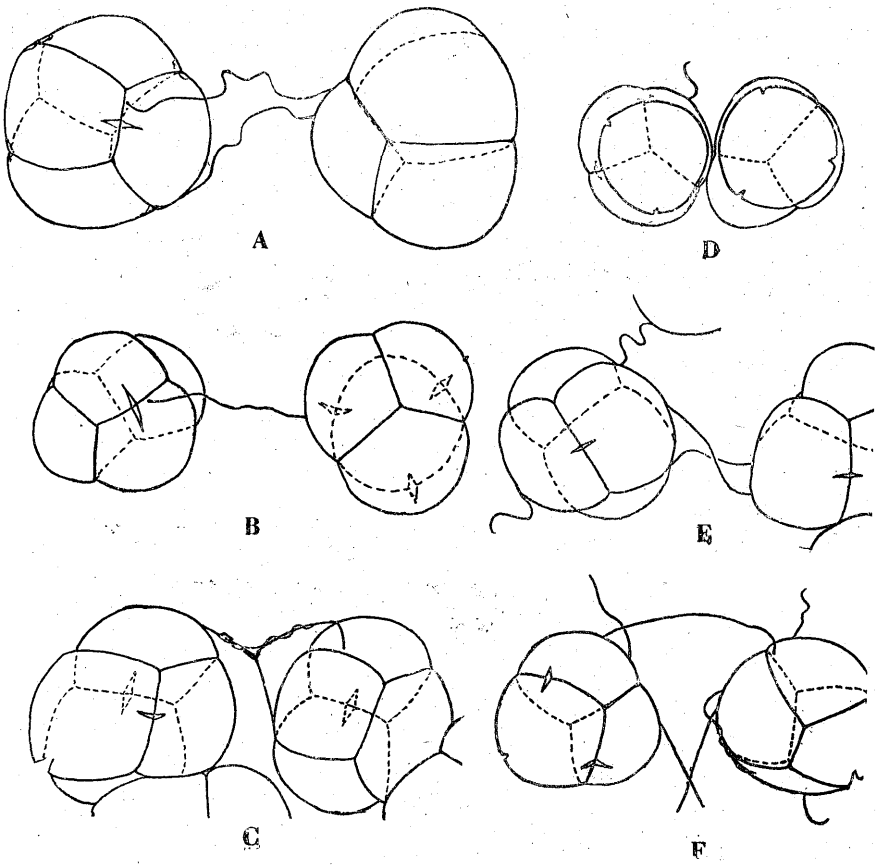

Fig. 1. Schematic representation of pollen grains having viscid threads.

粘結糸を有する花粉粒の図を示す. 約 ×600

A. *Ledum palustre* L. var. *yesoense* Nakai (エゾイソツツジ) B. *Loiseleuria procumbens* Desv. (ミネズオウ) C. *Tsusiophyllum Tanakae* Maxim. (ハコネコメツツジ) D. *Phyllodoce nipponica* Makino (ツガザクラ) E. *Epigaea asiatica* Maxim. (イワナシ) F. *Kalmia latifolia*. (アメリカシヤクナゲ)

in Ericaceae should be reconsidered.

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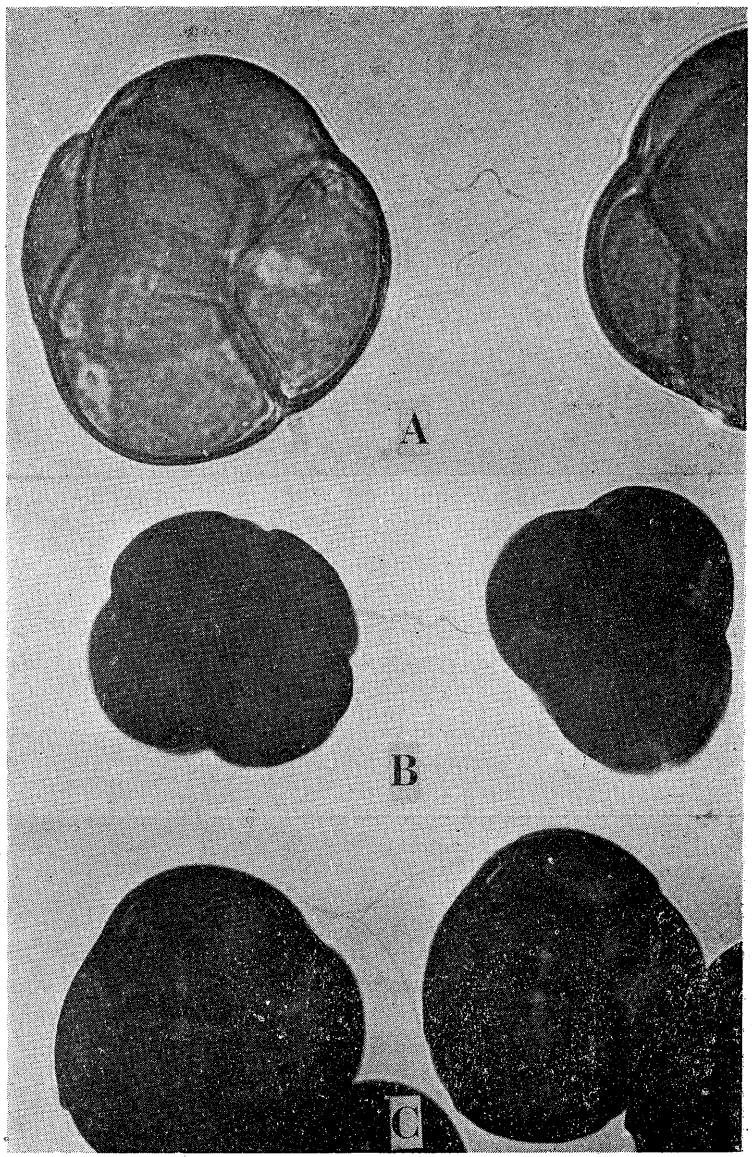
摘　　要

ツツジ科の植物に於ては花粉の4個集合粒に粘結糸があるかないかにより分類学上の位置が論議されてきた。しかし筆者は従来粘結糸のないように思われていたハコネコメツツジ属，イソツツジ属，ホツツジ属，ヨウラクツツジ属，ツガザクラ属，ミネズオウ属，イワナシ属及び北米産のアメリカシャクナゲ属に於て粘結糸のあることを確認した(併しツツジ属の粘結糸に比しやや細く，そしてその数も少い)。以上の結果から見て，この性質をとりあげて族をわける方法は必らずしも妥当であるとはいえない様に思う。併しそれは分類学上の問題として分類学者におまかせすることにして，ここではこれ等のものに粘結糸がないというのは誤りであることを記録しておく。

○群芳図譜の内容と発行年代(久内清孝) Kiyotaka HISAUCHI: Contents and dates of publication of "Gunpo-zufu."

本書は画家和田英作，佐藤尊吉両氏が群芳図譜刊行会の名で世に出した10巻から成る折本の絵本であるが専門的にも役立つ本である。よつて，ここに各巻の発行日と其の内容を記録する。

1. 15 VI, 1919 (大正八) シャクヤク，スイセン，ツバキ，アブラナ，カキツバタ
2. 15 VII, 1919 ジンチョウゲ，ハクモクレン，フジ，モミジアオイ，シャクナゲ
3. 15 VIII, 1919 シュンラン，カンラン，コウシンバラ，アヂサイ，ヒナゲシ，ヒマワリ
4. 15 IX, 1919 ススキ，キキョウ，オミナヘシ，ナデシコ，ハギ，フジバカマ，クズ
5. 15 X, 1919 シヲン，アサガヲ，シウカイドウ，トロロアヲイ，フヨウ
6. 15 XI, 1919 サザンカ，アケビ，リンドウ，ツバブキ，キク
7. 15 XII, 1919 ヲモダカ，ヤマユリ，コスモス，ケシ，タチアヲイ
8. 15 I, 1920 (大正九) ソメイヨシノ，ウスベニザクラ，関山，松月，楊貴妃
9. 15 II, 1920 ケマンソウ，アヤメ，サクラソウ，タンポポ，ナズナ
10. 15 III, 1920 ボタン，ヤマブキ，レンゲソウ，ハマナス，キミカゲソウ



M. Ikuso: Pollen grains of Ericaceae

Pollen grains with their viscid threads. 顕微鏡写真 (特に粘結糸を示す)

A. *Ledum palustre* var. *yesoense* (エゾイソツツジ) ×ca. 1200
B. *Loiseleuria procumbens* (ミネズオウ) ×ca. 1000
C. *Tsusiophyllum Tanakae* (ハコネコメツツジ) ×ca. 1000